3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

ProductInformation

Anti-Vesicle-Associated Membrane Protein 2
(VAMP-2, Synaptobrevin 2)
Developed in Rabbit, Affinity Isolated Antibody

Product Number **V 1389**

Product Description

Anti-Vesicle-Associated Membrane Protein 2 (VAMP-2) was developed in rabbit using a synthetic peptide SATAA TVPPA APAGE GGPPA PPPNL T, corresponding to residues 2-27 of mouse or rat VAMP-2 as the immunogen. This sequence has 25/26 residues identical in human, bovine and *Macaca mulata*. The antibody was affinity purified.

Anti-Vesicle-Associated Membrane Protein 2 specifically recognizes VAMP-2 (19 kDa) and may be used for the detection of VAMP-2 protein from rat brain membranes by immunoblotting and mouse brain sections by immunohistochemistry.

The phenomenon of intracellular protein transport, specifically vesicle docking and vesicle fusion, involves distinct processes mediated by distinct proteins.[1,2] Because the general membrane fusion events are catalyzed non-specifically, targeting of transport vesicles to specific acceptor membranes is thought to be determined prior to the vesicle docking and fusion process. Specific interactions between vesicle-associated membrane proteins (VAMPs), SNAP-25 and syntaxins are thought to form a SNAP receptor or SNARE complex that determines the destination membrane of the transport vesicle.[3] Once at the appropriate acceptor membrane, SNAP and NSF bind to the SNARE complex and facilitate membrane fusion.

The VAMP subfamily has seven members.[4] They are considered R-type SNAREs and they are localized to various post-Golgi compartments like: synaptic vesicles and secretory granules (VAMP-1 and –2),[5,6] sorting and recycling endosomes (VAMP-3/cellubrevin),[6] the trans-Golgi network (VAMP-4),[7] differentiated myotubes (VAMP-5),[8] and lysosomes (VAMP-7).[6]

Reagent

The antibody is supplied as lyophilized powder from phosphate buffered saline, pH 7.4, 1% BSA, 5% sucrose, and 0.025% sodium azide as preservative.

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling.

Preparation Instructions

Reconstitute the lyophilized vial with 0.05 ml or 0.2 ml deionized water, depending on package size. Further dilutions should be made using a carrier protein such as BSA (1%).

Storage/Stability

Lyophilized powder can be stored intact at room temperature for several weeks. For extended storage, it should be stored at –20 °C or below. The reconstituted solution can be stored at 2-8 °C for up to 2 weeks. For longer storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

The recommended working dilution is 1:1000 for immunoblotting.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

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7. Steegmaier, M. et al., Vesicle-associated membrane protein 4 is implicated in trans-Golgi network vesicle trafficking., Mol. Biol. Cell, **10**, 1957-1972 (1999).
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MCT,PHC 04/05-1